

NEW SPECIES OF SOUTH AUSTRALIAN GASTROPODA

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Plate xvii.

IN preparing a list of South Australian Gastropoda we found that some new species awaited description, and that a few names required emendation. The more obvious are here dealt with. Holotypes are in the South Australian Museum, and their registration numbers are quoted herein.

SCISSURELLA CYPRINA sp. nov.

Scissurella ornata Cotton and Godfrey (*nec* May), *S. Aust. Nat.*, XV, Nov. 30, 1938, p. 21, pl. i, fig. 8.

Minute, discoidal, somewhat oblique; colour yellowish-white; protoconch of one-and-a-half turns, squared by a beaded ridge, and sunken below the level of the two rounded adult whorls, which are somewhat angled by the canal; canal, a deep furrow, about mid-way between the suture and the periphery, has sharp, raised edges, and the whole is surmounted on a distinct ridge surrounding the shell; radial ribs, sixteen, raised, curved, interrupted by the furrow, extend from the suture to the small, deep umbilicus; numerous spirals, smaller than the ribs, do not pass over those ribs which are between the canal and the suture, but pass over the lower ribs and develop a crested appearance; aperture defined by a continuous narrow margin; slit open, deep, moderately wide. Holotype, height 1.5 mm., diameter 2 mm., Venus Bay, S. Aust. (Reg. No. D 9674). Distribution: Cape Borda, S. Aust., Venus Bay, beach.

From *Scissurella ornata* May, the species is larger, the spirals stronger and radials weaker. South Australian examples have been formerly labelled *ornata* in error.

ZEIDORA LEGRANDI Tate, 1894.

Zeidora tasmanica Cotton and Godfrey (*nec* Beddome), *S. Aust. Nat.*, XV, March 27, 1934, p. 53, pl. i, fig. 12.

This is separable from *Zeidora tasmanica* Beddome in the position of the protoconch, which does not quite reach to the posterior margin, whereas in the Tasmanian species it sometimes overhangs. Furthermore the South Australian shell is twice as large as the Tasmanian. Holotype, length 9.5 mm., breadth 6 mm.,

height 2 mm., depth of cleft 2 mm., Corny Point, S. Aust. (D 13371). Distribution: Corny Point; Venus Bay; also dredged St. Francis Island, 35 fathoms; Backstairs Passage, 7-20 fathoms.

CALLIOSTOMA (SALSIPOTENS) CALLIOPE sp. nov.

Calliostoma (Salsipotens) ciliare Cotton and Godfrey (*nec* Menke), *S. Aust. Nat.*, XVI, April 10, 1935, p. 19, pl. i, fig. 9.

Pyramidal, broadly depressed, thin, imperforate; colour yellowish, red-spotted along the suture; sometimes the adult whorls have a spiral line articulated brown and white like a twisted cord, below which are crescents of brown, open forwards, also with axial flames of brown growing wider as they descend to the periphery, beyond which they extend for a short distance across the base; sculpture obsolete, transversely striate, and decussated by very fine axial striae; whorls six, flat, margined below; suture linear; base flat; aperture obliquely ovate, outer lip margin callous within. Holotype, height 23 mm., diameter, 30 mm., Gulf St. Vincent, S. Aust., 13-17 fathoms (D 13611). Distribution: Gulf St. Vincent; Investigator Straits; Backstairs Passage; 13-17 fathoms; also W. Aust., Swan River; Esperance Bay; on beach. Formerly misidentified as *Calliostoma ciliare* Menke, from North-west Australia, which is different in shape, sculpture, and colour.

ETHMINOLIA ELVERI sp. nov.

Trochoid, depressed, widely umbilicate, thin; whorls medially angulate, and subangulate above; colour extremely variable; base colour white or rose, axially flecked and blotched; protoconch minute, depressed, white, smooth, of one-and-a-half whorls; sculpture of regular microscopic spiral lirae cut by fine, regular, accremental striae; umbilicus profound and narrow, spirally obsolete ribbed; aperture subquadrate, outer lip thin; columella simple, very slightly convex at the lower half. Holotype, height 7 mm., diameter 10 mm., Gulf St. Vincent, S. Aust., 7 fathoms (D. 13388). Distribution: Beach, not common, Hardwicke Bay, Spencer Gulf; dredged, Gulf St. Vincent; Investigator Straits; Backstairs Passage; Cape Jaffa; 7-130 fathoms. Also King George Sound, W. Aust., on beach and dredged to 28 fathoms. South Australian Museum specimens have been labelled *angulata* Adams, *prodictus* Fischer, and later *probabilis* Iredale. The species is larger, higher, less shouldered, and less acutely angulate than the Peronian *probabilis* Iredale.

ETHMINOLIA CINCTA sp. nov.

Conical, elevated, umbilicate, spirally ribbed; colour, creamy-white with dull red interrupted zig-zags, except the first three whorls which are yellow; spiral

striae, very fine, crowded, present on the base and in the umbilicus; well marked axial wrinkles in the infrasutural excavation; spire rather high, scalar; protoconch small, blunt; adult whorls about five-and-a-half, convex medially, with a noduled shelf below the suture, angulated, and ribbed at about one-fifth of their breadth, and flatly rounded from the angulation to the suture; last whorl bluntly angulated at the edge of the rounded base; suture well defined; aperture slightly oblique, round; outer lip thin, sharp; inner lip thin, sharp, slightly spreading on the columella; interior iridescent; umbilicus wide, deep, much impressed at the suture, which is spirally continuous to the apex. Holotype, height 4.5 mm., major diameter 6.5 mm., minor diameter 5.5 mm., Leven's Beach, Spencer Gulf, S. Aust., shallow water (Cotton) (D. 3389). Distribution: Beachport, to Hardwicke Bay, Spencer Gulf, to 200 fathoms.

Related to the Peronian shell, *Ethminolia pulcherrima* Angas (*Minolia*), but our shell has the sculpture more valid, though the base is almost smooth; the coloration is different from the bright dotting of the N.S. Wales shell. The deeper water form from 200 fathoms off Beachport is less validly sculptured, with whorls more rounded and smaller, with higher spire, recalling *Ethminolia pulcherrima emendata* Iredale, the Peronian deep-water form.

SPECTAMEN MARSUS sp. nov.

Conoidal, umbilicate, thin; colour, protoconch white, consisting of one-and-a-half whorls, then five adult whorls of saffron yellow, gradually fading out into very light yellow or dull grey; adult whorls and base have rather broad, equidistant, radiating, somewhat flexuous, rosy streaks which are disconnected at the periphery; spiral striae very crowded; spire elevated; whorls six, convex, depressed—canaliculate below the suture, gradate; last whorl carinate; aperture subquadrate; outer lip thin; columella scarcely arcuate, narrow, forming an angle with the basal margin; umbilicus funnel-shaped with two spiral carinae within, which are granulate; the angulate margin has about twenty tubercles, due to axial wrinkles in the umbilicus, which end just outside the border. Holotype, height 5.2 mm., major diameter 7 mm., minor diameter 6.5 mm., Beachport, S. Aust., 40 fathoms (D. 13390). Distribution: Dredged, Beachport to 120 miles west of Eucla, Great Australian Bight, 40–300 fathoms.

Differs from *Spectamen philippensis* Watson, in being smaller, thinner, and less elate; it is somewhat less canaliculate at the suture, and the spiral lineations are more crowded; it is yellowish instead of white; the rosy axial colour markings are fewer, and are present on the base; also there are two or three spirals in the umbilicus. In all these characters, except the colour, our shells show some varia-

tion, a few having been misidentified as *Spectamen bellulus* Angas, but they are not that species, and are merely variants of *Spectamen marsus*.

BASILISSA BOMBAX sp. nov.

Basilissa radialis var. *bilix* Verco (*nec* Hedley), *Trans. Roy. Soc., S. Aust.*, XXX, 1906, p. 218, pl. x, fig. 1, 2, 3.

Depressedly conical, umbilicate; protoconch homostrophe, smooth, of one-and-a-quarter whorls; adult whorls six; spire somewhat gradate; one marked spiral rib in the first whorl and two in the others, becoming gradually more valid and distant; a secondary threadlet appears between the two ribs in the third whorl; another threadlet arises in the fourth, two in the fifth, and still another spiral rib in the body-whorl; the last rib forms the periphery and the suture, and, separated from its fellow by a furrow, gives an apparent canaliculate suture; sutures well marked; base flatly rounded with eight, equidistant, nearly equal, concentric rounded spiral lirae, as wide as their interspaces; shell surface cancellated by crowded narrow erect lamellae, crossing the spirals, and sinuous, but not following exactly the outline of the labrum, and ending at the outer basal lira; crowded radial striae cancellate and granulate the base; aperture obliquely quadrate, with a large posterior sinus in the outer lip, rather deeper than wide; a second sinus at the baso-labral junction, about as deep and rather wider, and a third shallow and wide at the baso-columellar angle; columella oblique, concave, expanded towards the umbilicus, truncate anteriorly; inner lip thin, smooth; interior of aperture smooth; umbilicus deep, small, margined with oblique plicate tubercles. Holotype, height 3.6 mm.; diameter 3.4 mm., Cape Jaffa, S. Aust., 130 fathoms (D. 13397). Also dredged from 300 fathoms off Cape Jaffa.

Formerly recorded as *Basilissa radialis* var. *bilix* Hedley, a Peronian shell, noticeably different in the validity of sculpture and the shape of the whorls. The species is well figured by Verco *loc. cit.*

PELLAX GABINIANA sp. nov.

Subglobose, thin, imperforate, smooth; ground colour whitish, beautifully closely lined or speckled with rose—which colour predominates; protoconch white; columella white; spire depressed, of three whorls; subangled at the lower portion of the body-whorl, where there is a white maculated band; aperture oval, simple. Holotype, height 6 mm., diameter 4.5 mm., Royston Head, Yorke Peninsula, S. Aust. (D. 13414). Distribution: Corny Point, and generally along the west coast of Yorke Peninsula, to Albany, W. Aust. This distinctive species has been incorrectly listed as *Phasianella kochi* Philippi.

SCALA (MAZESCALA) BEACHPORTENSIS sp. nov.

Squat, imperforate; sculpture of thin, erect lamellae, forming a right-angled shoulder on the upper portion of each whorl; lamellae numbering seventeen on the body-whorl; interstices crossed by obscure spiral incisions; protoconch of four whorls, smooth, polished, sharp; aperture oval, free. Holotype, height 9 mm., diameter 4 mm., Beachport, S. Aust., 110 fathoms (D. 13302). The holotype is unique.

From *Scala heloris* Iredale, the species differs in being smaller, more numerous but less prominently variced, and in lacking the basal rib. From *Scala belliosa* Hedley, it differs in being spirally sculptured and stouter.

SCALA (NARVALISCALA) FLINDERSI sp. nov.

Elongate, acuminate, imperforate, variced at about every one-and-a-quarter whorls; sculpture of longitudinal rounded ribs, about twenty-five on the body-whorl, crossed by about six spiral threadlets; protoconch smooth, sharp, inconspicuous; adult whorls, fourteen, rounded; suture impressed; base smooth, defined by a fine basal rib; aperture circular. Holotype, height 24 mm., diameter 7 mm., 120 miles west of Eucla, Great Australian Bight, 300 fathoms (D. 13303). The holotype has the varices mostly on the dorsum, therefore only those at the upper quarter and the last one on the body-whorl, are seen in the figure.

Compared with *Scala dorysa* Iredale, the present species is separable by the greater height of the individual whorls, and their roundness. The last three whorls of *Scala flindersi* together, form more than half the length of the shell, whereas in *Scala dorysa* they form less than half.

SCALA (NODISCALA) SUBCRASSA sp. nov.

Narrow, thick, imperforate; longitudinally sculptured with thick, low ribs, angled at the upper third, and obsolete at the rather deep suture, crossed by spiral threads; protoconch, fairly blunt, of two smooth whorls; adult whorls nine, flattened; basal keel indistinct; aperture oval, not separate from the body-whorl, a thick varix forming the outer lip; a further thick varix is situated in the middle back of the penultimate whorl. Holotype, height 13 mm., diameter 4 mm., Gulf St. Vincent, S. Aust., 22 fathoms (D. 13301). Allied to *Scala apostolorum* Iredale, but is larger, and also differs in that the basal rib is obsolete; the general appearance too is different.

The present species was formerly classed in error as *Scala crassilabrum* Sowerby, from the Philippines and Central America.

RETICUNASSA FLINDERSI sp. nov.

Thin, white, sculptured with twenty obsolete, axial riblets, crossed by about eight spiral riblets, producing rather depressed tubercles at the intersections; base with five sharp, spiral riblets; protoconch of four depressed whorls, smooth, polished, horn coloured, with microscopic axial accremental striae only; adult whorls four, a little convex, sharply shelved at the suture. There is no abrupt cessation of sculpture at the commencement of the adult shell as in *Reticunassa dipsacoides* Hedley, but a very gradual formation of sculpture, leaving no definite axial indication as to the finish of the protoconch and the start of the adult shell; the basal keel of the protoconch is only just discernible at the junction. Holotype, height 9 mm., diameter 5 mm., Cape Jaffa, S. Aust., 300 fathoms (D. 13298).

Distinguished from *Reticunassa dipsacoides* Hedley, by the less developed sculpture, the different basal sculpture, the protoconch features, and the relative height and diameter.

SEGNITILA gen. nov.

Shell dextral, discoid, keeled, somewhat flattened beneath, last whorl comparatively rather large, spire small and sunken, umbilicus narrow, aperture acutely angled, no internal laminae. Genotype, *Segmentina victoriac* E. A. Smith, 1881.

This genus is introduced for that species, in describing which Smith stated: "It appears inconsistent to place a shell in *Segmentina*, lacking the essential characters of internal laminae."

ATAXOCERITHIUM BEASLEYI sp. nov.

Protoconch, blunt, of three convex whorls, the first smooth, the second and third with distant, valid, axial, sigmoid, round cords. Spire whorls with close spirals, rounded, wider than the interspaces, five in the penultimate whorl, the lowest two more prominent throughout, the upper three diminishing in number towards the apex where there is but one; periphery roundly angular; base nearly flat with six spirals; axial, obsolete, round costae, nearly as wide as the interspaces, fourteen in the penultimate whorl; mouth roundly rhomboid; outer lip slightly expanded, sharp, crenulated; inner lip erect and free; canal short, nearly closed at front of point of contact of inner and outer lip, reflected; collumella curved and forming an obtuse angle at the canal. Shell colour of holotype white. Holotype height 8 mm., diameter 2.9 mm., Cape Borda, S. Aust., 55 fathoms (D. 13435). Distribution: 81 miles west of Eucla, 4 fathoms; Gulf St. Vincent, ? depth, seven specimens larger and more solid than the type, four are uniformly brown, another has the protoconch white and the rest of the shell brown, two are nearly white; 45

fathoms east of north of the Neptune Islands; Beachport, 100–150 fathoms, one specimen brown; Gulf St. Vincent, 10 fathoms; 50 miles west of Eucla, W. Aust., 80 fathoms.

This species differs from *A. serotinum* in having valid spirals of obsolete axials. In *A. serotinum* the axials are more prominent than the spirals.

EPIDEIRA FLINDERSI sp. nov.

Fairly solid, acuminate, last whorl longer than the spire; colour, cream, blotched with light brown just below the sutures; sculpture of spiral lirae crossed by numerous, fine, axial plicae, which have each two small nodules arranged vertically, one at and one just below the suture; below the lower nodule is a narrow area in which the axial plicae are obsolete, there another nodule tops the longer plica of the whorls; plicae are somewhat cut by the axials but not sufficient to form distinct tuberculose sculpture; protoconch bulbous, of two smooth, turbinate whorls, set obliquely on the adult shell; adult whorls seven. Holotype, height 21 mm., diameter 8 mm., 80 miles west of Eucla, Great Australian Bight, 75 fathoms (D. 13645).

The species is readily distinguished from others of the genus, the only one bearing the remotest resemblance is *Epideira striata* Gray, from New South Wales, which, however, has a coarser sculpture of a very different pattern.

EPIDEIRA BEACHPORTENSIS sp. nov.

Very solid, acuminate, last whorl longer than the spire; colour cream, with distant lines of elongate, small, brown spots; sculpture of fine, regular, spiral riblets, with slightly wider interspaces, the whole crossed by weak, irregular axials; protoconch bulbous, of two smooth, turbinate whorls, set obliquely on the adult shell; adult whorls six; columella bearing a heavy callus; notch broad and shallow; outer lip not inflected; canal very short. Holotype, height 31 mm., diameter 11 mm., Beachport, S. Aust., 150 fathoms (D. 13644).

This species appears quite distinct from all its congeners.

ONUSTUS FLINDERSI sp. nov.

Onustus peronianus Cotton and Godfrey, *nec* Iredale, *S.A. Nat.*, XIII, 1932, p. 38, pl. i., fig. 4.

Trochiform, medium size; white or yellowish, the basal ridges yellowish-brown; growth lines strong, irregular, oblique, crossed by flexuous, curved, oblique striae; base with numerous, sharp-ridged, curved, granose ribs, with fine thread lines between, crossed by distinct spiral ribs; spire conical, slightly convex;

protoconch conic, whorls few, convex, smooth, polished, white, with marks where very small fragments have formerly adhered; adult whorls nine, the last keeled; base flat; aperture low, broad, interior porcellanous; outer lip produced above; inner lip reflexed, forming a thick, white, shining callus; juveniles narrowly umbilicate, adult shells without umbilicus; opereulum squarish. Holotype, height 9 mm., diameter 18 mm., Petrel Bay, St. Francis Island, S. Aust., 15-20 fathoms (D. 13615).

The upper surface is almost or quite hidden by the agglutinated shells. Compared with *Onustus peronianus* Iredale, the species is smaller and differently sculptured, and has the usual South Australian molluscan shells attached.

GUNDLACHIA EREMIA sp. nov.

Limpet-like, subpellucid, thin, oval, obliquely conical, in two distinct tiers; the juvenile portion above, long and narrow, one-third overlapping the margin of the adult; viewed laterally the juvenile is set obliquely on the adult, but follows the median line when viewed dorsally; internal shelf well produced. Holotype, total length 3.5 mm., breadth 1.8 mm., juvenile, length 2 mm., breadth 0.9 mm., Mount Lofty, S. Aust., in creek (D. 13613). Distribution: Mount Lofty; Aldgate; Rced Beds, River Torrens, near Henley Beach.

From *Gundlachia petterdi* Johnston, the species is smaller, thinner, smoother, and has the juvenile portion set along the median line and not obliquely to it, also the internal shelf almost reaches to the middle of the adult shell. It is comparatively rare in South Australia.

EXPLANATION OF PLATE xvii.

- Fig. 1. *Epideira flindersi* sp. nov. ($\times 2.4$).
- Fig. 2. *Gundlachia eremia* sp. nov., dorsal view ($\times 12$).
- Fig. 3. *Gundlachia eremia* sp. nov., ventral view ($\times 12$).
- Fig. 4. *Epideira beachportensis* sp. nov. ($\times 1.6$).
- Fig. 5. *Scala (Mazeseala) beachportensis* sp. nov. ($\times 7.6$).
- Fig. 6. *Ataxocerithium beasleyi* sp. nov. ($\times 6$).
- Fig. 7. *Scala (Narvaliscala) flindersi* sp. nov. ($\times 1.8$).
- Fig. 8. *Reticunassa flindersi* sp. nov. ($\times 4$).
- Fig. 9. *Ethminolia cineta* sp. nov. ($\times 5.6$).
- Fig. 10. *Ethminolia elveri* sp. nov. ($\times 4$).
- Fig. 11. *Spectamen marsus* sp. nov. ($\times 6$).
- Fig. 12. *Pellax gabiniiana* sp. nov. ($\times 6$).
- Fig. 13. *Scala (Nodiscala) subcrassa* sp. nov. ($\times 4$).